

## CLAIMS

1. A composite sacrificial anode for immersion in a corrosive environment comprising a plurality of castings  
5 of a sacrificial material each disposed around a corresponding electrical connector for attachment to a structure to be protected, a part of the surface of each casting being protected from corrosion by the environment by being adjacent to at least one other casting, wherein  
10 the castings are connected electrically together only via their respective electrical connectors and wherein the composite anode has a weight greater than 10 kg.
2. An anode as claimed in claim 1 wherein composite  
15 anode is in the form of a block.
3. An anode as claimed in claim 2 wherein the block is circular, square or rectangular in cross-section.
- 20 4. An anode as claimed in any one of claims 1 to 3 whose weight is greater than 100 kg.
5. An anode as claimed in any one of the preceding claims wherein the castings are joined together by a  
25 waterproof mastic or resin.
6. An anode as claimed in claim 5 wherein the waterproof mastic or resin coats the surface of each casting around its electrical connector.
- 30 7. An anode as claimed in any one of claims 1 to 6 wherein each electrical connector is substantially straight.

**ART 34 AMDT**

AMENDED SHEET

8. An anode as claimed in any one of claims 1 to 7 wherein the mastic or resin completely fills any gaps between the castings.

5 9. An anode as claimed in any one of claims 1 to 8 wherein the castings are identical.

10. An anode as claimed in any one of the preceding claims when composed of between two and six castings.

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11. An anode as claimed in any one of claims 1 to 10 wherein the sacrificial material is magnesium or a magnesium alloy.

15 12. An anode as claimed in claim 11 wherein the sacrificial material is an alloy consisting essentially of magnesium and from 0.15 to 1.3% by weight of manganese.

20 13. A method of producing a composite sacrificial anode for immersion in a corrosive environment and having an electrical connection for attachment to the structure to be protected, which method comprises casting a plurality of segments of a sacrificial material each in contact  
25 with a corresponding electrical connector, each connector being at least partly within its corresponding individual segment, assembling the segments together to form a composite anode such that a part of the surface of each segment is protected from corrosion by the environment by  
30 being adjacent to at least one other segment, and electrically connecting the segments together only via their electrical connectors, wherein the weight of the composite anode is greater than 10 kg.

14. A method as claimed in claim 13 wherein the composite anode is in the form of a block.

15. A method as claimed in claim 14 wherein the block is  
5 circular, square or rectangular in cross-section.

16. A method as claimed in any one of claims 13 to 15 wherein the weight of the composite anode is greater than 100 kg.

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17. A method as claimed in any one of claims 13 to 16 wherein the castings are joined together by a waterproof mastic or resin.

15 18. A method as claimed in claim 17 wherein the waterproof mastic or resin is arranged to coat the surface of each segment around its electrical connectors.

19. A method as claimed in any one of claims 13 to 18  
20 wherein each electrical connector is substantially straight.

20. A method as claimed in any one of claims 13 to 19 wherein the mastic or resin completely fills any gaps  
25 between the castings.

21. A method as claimed in any one of claims 13 to 20 wherein each segment is identical.

30 22. A method as claimed in any one of claims 13 to 21 wherein the anode is composed of between two and six segments.

23. A method as claimed in any one of claims 13 to 22  
35 wherein each segment is formed by continuous casting.

24. A method as claimed in claim 23 wherein each segment is forcibly cooled.

5 25. A method as claimed in claim 24 wherein the cooling is effected by water.

26. A method as claimed in any one of claims 13 to 25 wherein the casting is effected by direct chill casting.

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27. A method as claimed in any one of claims 13 to 26 wherein the sacrificial material is magnesium or a magnesium alloy.

15 28. A method as claimed in claim 27 wherein the sacrificial material is an alloy consisting essentially of magnesium and from 0.15% to 1.3% by weight of manganese.

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